

REMARKS

By the present amendment, independent claim 1 has been amended to obviate the examiner's objections thereto and/or to further clarify the concepts of the present invention. Entry of these amendments is respectfully requested.

In the Office Action, claims 1-5 were objected to as containing an alleged informality. In response, claim 1 has been amended as suggested. Withdrawal of the objection is requested.

Claims 1-5 also were rejected under the second paragraph of 35 USC §112 as being indefinite. In making this rejection, it was asserted that the noted phrases were unclear. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

In response to this rejection, it is to be noted that the phrase "in desired form such as bag form or sheet form" has been deleted from lines 3-4 of claim 1. As to the second phrase, it is to be noted that "allowed to be" has been deleted from the last two lines of claim 1. Accordingly, withdrawal of the rejection under the second paragraph of 35 U.S.C. §112 is respectfully requested.

Claims 1, 2 and 5 were rejected under 35 USC §103(a) as being unpatentable over the patent to Usui in view of the patent publication to Munro et al. In making this rejection, it was asserted that the former patent teaches the entire heat-generating body as set forth

in the noted claims basically with the exceptions of (1) the recited difference between critical moisture values (claim 1) and (2) the inclusion of an organic filling agent in the hydrophilic gel agent of the adhesive portion (claim 2). The latter publication was relied upon for supplying both of these teaching deficiencies.

In particular as to exception (1), two assertions were made. First, it was asserted that the disclosed heat generating composition would inherently have a moisture value. Second, the teachings in the Munro et al patent were that moisture value may be varied to control the adhesiveness and microbial resistance of the adhesive portion. It then was concluded that it would be obvious to optimize the moisture value of the adhesive portion and such would include the recited minimum difference between the moisture values. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

Before discussing the rejection in detail, a brief review of the presently claimed invention may be quite instructive. Claim 1 as amended relates to a heat-generating body comprising a heat-generating portion formed by sealing a heat-generating composition causing an exothermic reaction in the presence of air in an air-permeable container. The heat-generating body further includes an adhesive portion formed by comprising, as a main component, a water-containing hydrophilic gel agent obtained from a hydrophilic polymeric thickening agent. An important feature of the presently claimed invention is that a difference between critical moisture values of the heat-generating portion and the adhesive portion is 2% or less.

As apparent from Table 4 of the present specification, when the difference between the critical moisture values is "2% or less" as in embodiments 1 to 3 of the specification, there is no transfer of moisture between the adhesive portion and the heat-generating portion, and a heat-generating body having excellent heat-generating characteristics and adhesive property can be obtained. When the difference between the critical moisture values is 6% to 10% as in comparative Examples 1 to 3, however, there is transfer of moisture between the adhesive portion and the heat-generating portion, and the heat-generating characteristics and adhesive property are deteriorated. Hence, it is submitted that the presently claimed invention provides a remarkable effect as compared with the bodies outside the subject invention. Further, it is submitted that such a heat-generating body is not taught or suggested by the cited patent publications to Usui and Munro et al, whether taken singly or in combination.

In support of the above assertion as to the Usui and Munro et al patent publications not teaching the presently claimed invention including the important feature of a difference between critical moisture values of the heat-generating portion and the adhesive portion is 2% or less, attention is directed to the attached Declaration under 37 CFR § 1.132 of Mr. Yukio URUME, one of the inventors in the subject application. The Declaration sets forth measurements made under the supervision and control of Mr. Urume regarding the formulations according to the Usui and Munro et al patent publications.

More particularly, as is apparent from the Declaration, the critical moisture value of the adhesive of formulation 5c in the Example 5 of the Munro et al patent publication was 68%. In addition, the critical moisture values of formulations 6a and 6c in the Example 6

of the same patent were 56% and 54%, respectively.

Generally, the critical moisture value of a conventional heat-generating portion is 80% to 95%, i.e., 80% or higher. Therefore, even if the adhesive in the Munro et al publication was substituted in the heat generating device of the Usui patent, the difference between the critical moisture values is as high as "12% or higher." Consequently, the presently claimed invention having the difference between the critical moisture values of 2% or less is not taught or suggested by the patent publications to Usui and Munro et al.

It is therefore submitted that the conclusion contained in the Action which was used as a basis for conclusion of obviousness that one of ordinary skill in the art "would have optimized, by routine experimentation, the critical moisture value of the adhesive portion" in the modified heat-generating body according to the Usui patent "to obtain the desired critical moisture value" is inaccurate. While it appears that the adhesive portion according to the Usui patent may inherently have a moisture value, neither publication teaches a difference between critical moisture values of 2% or less. It is considered improper to assert that one of ordinary skill would achieve the recited difference between the critical moisture values of 2% or less without such a teaching, since it is submitted that the teaching deficiency has been supplied using a prohibited hindsight reconstruction from applicants' own disclosure that the difference between the critical moisture values is 2% or less.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claims 1, 2 and 5, as amended, over the cited patent publications are respectfully requested.

Claims 3 and 4 were rejected under 35 USC §103(a) as being unpatentable over the same patent publications to Usui and Munro et al as above further in view of the patent publication to Otsuka et al. Reconsideration of this rejection in view of the above claim amendments and the following comments is respectfully requested.

Inasmuch as these claims are dependent upon independent claim 1, it is submitted that the considerations as discussed above are applicable.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. § 103(a) and allowance of claims 3 and 4 over the cited patent publications are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit

Serial Number: 10/524,211
OA dated December 5, 2007
Amdt. Dated May 2, 2008

Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,
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Enclosure: Declaration of Mr. Urume